

QL TECHNICAL REVIEW

ISSUE 7

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EDITORIAL

Firstly an apology. The bulk of this issue was prepared several months ago, immediately prior to my being on the receiving end of some very upsetting news on the domestic front. Suffice to say that I have been through a very trying and depressing time but it looks as though I will be in a position to continue with C.G.H. Services for the foreseeable future. My apologies for any delays with correspondence etc due to these events.

And an apology for those of you expecting reviews of lots of new products. Most of this issue is taken up with material we've had on file for some time, although there are two initial reports on the Miracle Systems Gold Card. There is also a very good review of Perfection from Rich Mellor, which you wouldn't have had if we'd gone to press earlier!

We also welcome reviews of hardware and software of less recent vintage, as many QLTR readers are fairly new to the QL and they may not be aware of older, more established programs or hardware. If in doubt, send it in and we'll see if we can fit it in.

The QL scene has seen several exciting developments on the hardware front in recent months and Dr Sohail Bhatti's QL Advancement Workshop is attempting to bring together the needs of users with that of developers and software writers. No easy task, but one which we will

continue to support. Compatibility, or rather the lack of it, has always been a problem for QL users (as it has on other developing machines) and if the QL market isn't to fragment into several small, and non-viable, fragments, all new hardware developments must keep compatibility with as much existing software as possible. At the same time we need new software to be written that will keep the QL competitive (at some level or another) with other machines and not become a complete hobbyist backwater.

Finally I've decided to hand the editorial control of both QL Technical Review and QL Leisure Review (Issue 2 out when you lot do some more writing for it!) to Bruce Nicholls. He also has access to superior DTP and Laser Printing facilities so the appearance of this issue should be much improved. So all future editorial correspondence to Bruce Nicholls, 57 Shaftesbury Road, Romford, Essex, RM1 2QJ. Best of luck Bruce!

O.K. That's all for this editorial, I hope you find this issue of interest - we're always pleased to receive feedback from users - even if we can't guarantee printing it. (Submissions on disk are best - I'd rather not waste my time typing in text that arrives on paper having been produced on a word processor!)

Richard Alexander

NEWS

For a machine which most of the big-circulation computer mags have long since consigned to the dustbin of history, the QL is still showing many signs of life. New hardware and software projects, all of them aimed at improving the computing environment for QL users are still appearing with some frequency.

Miracle Systems' Gold Card is now established as a viable platform for QL software. In discussion with them, they feel confident that all software compatibilities have been resolved (or at least identified and work-arounds established.) The price will remain a stumbling block for many QL users (your editor for one!) but many will upgrade their hardware to a level in advance, in some respects, of some PC, ST and Amigas - at least in their standard configurations. Miracle are also working on a new board which might well incorporate improved graphics (resolution and colour-wise), sound and other options. Nothing is fixed as yet and we're unlikely to hear more until it's ready to roll. Another option being considered is a QL board to be plugged into a PC! Miracle Systems have also brought out a high-density disk drive for the QL. This is yet another step-up for the QL specification. Again many users will be quite happy with their existing gear and luckily the new drives can read older double density disks, so software houses like ourselves won't be required to spend our precious money on more hardware just to keep compatibility.

QView are continuing to develop Minerva, with version 1.90 now shipping. Tony Firshman has taken over the marketing of the product to allow QView more time to work on the project itself. The latest version works fine with the new Gold Cards, and Miracle and QView are co-operating on finding a way to make the new v2.00 Minerva ROM

(with its own Real-Time Clock etc) and Gold Card mutually compatible.

Mice are flavour of the month again on the QL scene. Both Jochen Merz and QUANTA have announced they will be selling the QIMI mouse interface. Whereas the Merseyside QUANTA group have announced their own mouse interface. Jochen Merz also sells mice and adaptors, so you can use Amiga mice. (C.G.H. Services will be happy to sell anyone a Naksha mouse for £25.00 (please state whether you want an ST, Amiga or PC compat mouse) or a Contriver Euromouse for £15.00. We can also supply mouse mats at £2.50 each if you want one. Note that the QIMI interface can use Atari ST mice.) (TK Computerware are advertising the "QUIMI" interface and mouse for £101.50 in the August 1991 QL World - surely some mistake, Mind you they're advertising the Tandata QCOM set for £94.00 - some difference to the £32.00 QUANTA will be charging their members according to the August 1991 QUANTA newsletter.) Talking of adaptors - the Merseyside QUANTA group have made available QL Joystick adaptors once more. These only cost £4.00, and once you've got them hooked into your QL you can then use a wide variety of Atari compatible joysticks. (C.G.H. Services will be only too pleased to supply joysticks too, prices range from £7.50 to £33.50 depending on model. We can also sell a wide variety of Modems - but you'll have to sort out the QL end yourself!).

I notice that Qlympic and COWO are planning a limited edition of 50 Super-QLs. I'd advise caution here until the product is definitely ready to ship and has been reviewed. We all remember the Futura fiasco, and the problems with THOR International.

O.K. enough hardware gossip. What's

new with the software scene in QL-land. PROGS have cut the price of their software - but wait until Dilwyn Jones prints the official prices in his catalogue or price list as looking at the PROGS recommended prices they don't seem to take into account currency conversion and other costs - and on programs costing £10.00 (but in Belgian Francs) that is expensive. DataDesign is reviewed in this issue and we've covered The Painter and their ClipArt. QRactal will be covered in QL Leisure Review 2.

Digital Precision's Perfection has finally made it to the purchasers. Long gestation time on this one, due to beta-testers coming up with a barrel load of suggested improvements. I understand that people are still waiting for the Spell-Checker (August 1991) I hope that people find the wait worthwhile. Initial impressions are that it's good, but not necessarily worth the £90 asking price (£130 for the Spell-checker version.) As the product is still being developed it's probably unfair to pass judgement here (See review for more details) - but unless people are willing to fork out £90 for it, it may not be financially worthwhile sorting out any problems! What's next I wonder - a Mega Spreadsheet for the QL? (Actually the QL with Gold Card would be an excellent set-up for a Spreadsheet as it wouldn't require brilliant graphics, colour or sound, whilst the memory and speed would be good. Who wants to program it?).

Ken Baker Software have been advertising a range of QL utility software in QL World: Speedsort, QLDL ScreenMaster, Planner and TranQuil. Nothing really exciting here but with prices ranging from £10.00 - £20.00 they may find a market. Mind you - unless someone starts reviewing them, no-one is going to buy them! (Subtle hint or what?)

Dilwyn Jones Computing continues to publish worthwhile programs. Joe Haftke

has been busy with a variety of utility programs, including File Master; Imre Dominick has produced a SuperDisc Index and Norman Dunbar has written The Gopher, a file-finder and WinBack a backup utility for Miracle Hard-Disks. See Dilwyn's advert for more details. Dilwyn has sent 5 of his most recent programs here for review and we promptly dispatched them to reviewers. Hopefully some reviews will grace this issue and QLTR 8. Dilwyn has also taken over RobRoy Software's bargain pack consisting of Inkwell Deluxe, Inktyper, Cue-Well 2 plus 20 fonts.

C.G.H. Services have released a new utility, Andy Pritchard's ScriptWriter. This is a revised version of Andy's QL Playwright program of a year or so ago. Andy has improved the user interface, made printing easier and everything now works fine with Minerva. Yours for a mere £15.00. Not only does the program allow for the creation of scripts, you can even use it to produce text files and edit Basic and other programs. The only files it doesn't like are machine code and unavoidable. (I wonder if we could use Unavoidable with it to produce multiple columns and a P.D. Spell-Checker?) The ST-QL Screen Converter and QL Image Processor program by Alan Pemberton and Rich Mellor is also now complete. The speed of conversions is now very fast and the results are excellent. Yours for a mere £10.00. Ian Thompson has finished the 3-D Terrain program that allows data input from Abacus to be shown in 3-D. Our thanks to Mike and Sue Lloyd for their permission to use the ideas contained in the QL World articles as the basis of the program. Please note that C.G.H. Services welcomes programs for commercial publication, no matter how obscure! What is important is that authors be prepared to maintain the programs (or at least provide the source code and share the royalties with anyone who does maintain the software!).

PERFECTION ?

Another major QL software publisher, Jochen Merz, has been busy with both new programs and revitalised older ones. Among the new programs is QDesign, a graphics program. Revised packages include QDIII a text-editor, QPTR with a revised manual, and EASYPTR II. Probably the most interesting item for QL users and programmers is the release of the printed QDOS Reference Manual. Not just the standard QDOS, but also the Thing system, Hotkeys etc. Included is advice on future-proofing QL software. However at £30.00 for 170 pages this may not reach the programmers who need it most - those with basic QL systems requiring guidance on making their software work on other people's machines.

Ablex have now stopped producing microdrives as they have run out of the special tape that is needed. If you are still using microdrives it might be a good idea to buy some more now before the inevitable price increases come into effect.

If you're a Spectrum fan you might like to know about an event being held at the Cambridge University Centre on 2nd of May at 2pm. The event is a celebration of 10 years of Sinclair computing with main reference to the Spectrum. There will be videos and tapes of Spectrum programs, exhibitions of spectrums plus emulators, an appearance of the PI man (Did you like the song ?) and possibly an appearance of Sir Clive himself. Numbers are strictly limited, tickets are £7.50 each with a maximum of 2 tickets per order (enclose a SAE). If you are interested write to :

24 Wyche Avenue
Kings Heath
Birmingham
B14 6LQ

Well that's all the news for this issue - well until I do the updates sheet for all those last minute items, or those I simply forgot! - look forward to receiving more news from you all in time for the next issue.

Richard Alexander.

Why another word-processor?

Ever since the QL was first released, it seems that most of its users have used (and cursed) the supplied word processor - Quill. Although Quill does have one or two major failings and is still plagued by bugs (even in v2.35), the ease with which it could be used has helped to make it hard to beat. Over the years, methods have been produced to make Quill multitask and to speed it up, as well as providing Quill with one or two of the missing links (caps lock indicators, spell checkers and 'glossary functions'). Unfortunately, even with TurboQuill+, Quill is extremely slow at performing major tasks and short of investing in a Gold Card, users have turned elsewhere for improvement.

I would not have believed my ears had I not been shown Quill running on a Gold Card - it now runs at a useable speed, but unfortunately one or two major bugs still exist in Quill, which makes it too unreliable and prone to crashing completely. As a result of the on-going criticism, Text87 was produced by Software87, which was hailed to be an all new replacement wordprocessor. Unfortunately, although this program is very powerful (and much quicker than Quill), it takes a lot of practice to get used to and many users find it too difficult to use (I understand that there is now a v4.00 which includes a much better user-interface).

Wanting to make a big impression on the wordprocessing market, Digital Precision (DP) decided to begin work on a replacement for Quill which would be very quick, simple to use and contain lots of excellent features - something upon which DP have built a very strong reputation in the QL market. They decided not to make the word processor fully WYSIWYG (What You See Is What You Get), because of the disadvantages speed-wise which this causes (as well as the problems which this creates in matching the program to your printer rather than the other way around!). Text87 makes a very good attempt to achieve WYSIWYG, but in my opinion suffers for it.

Anyway, two years after work was started on the program, v3.03 of Perfection has now been unleashed on an unsuspecting public. As with many of DP's other programs, this program comes complete with quite a large manual which does not actually mean that the program is not user-friendly, since most of this manual proves

non-essential for use of the program. However, before going into what the program provides, it is always a good idea to have a look at the manual to get a feel for the program.

The Manual

The manual itself is quite easy to read, and on an initial reading, much of it can be skipped by the casual reader, who will not be too concerned with what each command does, until (s)he comes to actually using the command within the program. The manual does however lack an index, which is most surprising in view of the fact that DP suggest that the manual is really needed for reference only (a statement that I would fully endorse!).

Setting the Program Up

After quickly making a backup of the supplied disk (using Toolkit II's WCOPY, or the supplied Backup program), I loaded Perfection to have a look at it. The initial set of windows would not fit on my TV, and so although I noticed that the size of the windows could be altered temporarily from within the program by pressing SHIFT F4, I decided that I had better run the configuration program and alter them permanently. The configuration program enables you to alter all of the defaults used by Perfection, and so along with altering the screen size and position, I also altered the colours used, the margins, and the default save/load device. Other settings which can be altered by the configuration program are the priority of Perfection and its clean-up job (which handles the screen tidying and certain memory tidying functions), the names of fonts to be loaded by the program, maximum line and page lengths, whether the lazy screen is enabled, justification and margins,...

After setting up the program as I wanted, I found my first minor niggle - if you choose red ink for the command window, then sometimes some of the messages produced by Perfection cannot be read. This has thankfully mainly been fixed in v3.02, but unfortunately still sometimes occurs when reading a file (hopefully by the time that you read this, the remaining few anomalies will be removed).

The display

Once loaded, you are presented with a screen which is somewhat similar to the layout of Quill. At the top of the screen appears a menu displaying a list of current options (if you start the program in MODE 8, then only half of the menu is displayed - press SHIFT F2 to switch between

the two halves). This menu can be switched on or off either by pressing F2 (like in Quill) or by using the configuration program. Below this appears the main work screen (which may itself be split if you want to cross refer between two parts of a file), and below this appears the status line and command window.

The display is nicely laid out and not cluttered, despite the number of indicators which appear in the status line (although these are only shown if the relevant feature is switched ON). The status line tells you the current line within the document; the current cursor column; the page number; whether you are in CAPSLOCK or not; whether word wrap is switched on; the current justification; whether searches are case sensitive; the type of lazy screen enabled; and much more. This proves very useful when using the program and is updated at quite a low priority, meaning that the program is not generally slowed whilst the different indicators are altered. This does however mean that if you are busy typing, it can take some time for the indicators to show the current status, however, you can even alter the priority of the status line update to suit your style of typing. A second status line can also be shown if you press CTRL+SHIFT+F5, which shows the number of words in the document, the number of pages in the document and the number of the current line within the current page, as well as the total number of characters in the given document.

Loading documents

Loading documents is trouble-free: Perfection can handle any type of document, including Quill, ASCII and Text87 files. It automatically recognises the file type and acts accordingly. Once a file is in Perfection format, the program loads the file much more quickly than Quill, and even on my biggest files, managed to load the whole file in one go, therefore making a large improvement on moving through the document. If however, the file is in Quill format for example, the loading time can be considerably longer whilst the program sorts the document out and strips out all of Quill's control codes. Although the general format of the file is retained, the layout can be affected quite badly by this process, meaning that you will then have to re-format parts of the file by hand to obtain the correct layout. However, despite this, after having tried to export a Perfection file and then Import it into Quill, I was amazed by the speed at which Perfection manages to convert a Quill file!! Oddly, Perfection has trouble merging any files which are not in ASCII format (although in relation to Perfection's own files, you need only delete the

header and footers which are also merged into the current cursor position, to re-instate the format).

Perfection loads a program into several small-sized chunks of memory (which helps prevent memory fragmentation), but also means that the actual part of the file which Perfection has to retain in its own work-buffer (ie. that part of the document which can be seen on screen) can be kept to a minimum. The advantages of this method of memory management will not be apparent to the user, since movement between each 'chunk' of the document takes place exceptionally quickly and is unnoticeable.

Cursor Movement

The way in which Perfection uses memory helps to make moving around a loaded document (no matter what its size) much much quicker than on Quill (or indeed any other editing program which I have seen), especially since you can dictate the type of lazy screen technology used by the program. This ranges from none (the whole of the display is updated as you move up or down the file), to Lazy Screen (as you move down or up the file, only the current line is altered on screen), to Very Lazy Screen (where the cursor moves in larger jumps the longer you keep the cursor key depressed). The effects of this in a large document are substantial (even when compared on a standard QL with Trump Card):

Program	Lazy Screen	Time
Quill	n/a	6 mins 54 secs
Text87	n/a	7 mins 43 secs
Perfection	Normal	5 mins 23 secs
Perfection	Very Lazy	26 secs!

Thankfully, moving up through a document is not as hazardous as on Quill and can be achieved without that panic stricken wait to see if Quill is updating its tables or has crashed. Although on earlier versions of Perfection, horizontal cursor movement could sometimes be a little more hazy, this has been much improved in the current release version of Perfection and is now excellent. Unfortunately there is no way to move left/right in a document without the cursor moving - this means that if your text lines are wider than the typing window, you have to put up with the screen flipping between the two halves!

One major omission from the program are proper TAB facilities. The program appears to support only one ruler, which means that TAB positions cannot be altered part way through a document (if you alter the TABs, then the whole document is affected, unlike on Quill where each

paragraph can use a different ruler). A minor snag with earlier versions of Perfection meant that it could be annoying when editing text to the right of a TAB mark, but thankfully this has been rectified in v3.02. The TAB markers themselves are not quite as complex as in Quill, since they do not allow you to have decimal TAB stops, nor right or centre TABs, which seems a curious omission.

The command system

The main commands can be accessed by the inexperienced user from the menus. The program's commands are listed on three menus, which you can display using F3 to go through the menus in order, or SHIFT F3 to go through the menus in reverse. The program supports all of the commands which you would expect in a word processor (although Quill's Hyphenate command is not supported). When you are more used to the program, all of the commands can be accessed by using different keys in conjunction with CTRL or ALT. There are very few ALTKEYs used by the program, and so those who have access to Qjump's Toolkit II or Hotkey II system will be able to set up lots of macros.

The commands all operate very quickly and with a smoothness reminiscent of much more expensive word processors. The search and replace facilities are both exceedingly fast (especially if you choose to make the search case sensitive), and can work both forwards or backwards from the current cursor position. Search speed is improved massively by the fact that Perfection begins by looking for the most infrequently used letters in the given search string. Block handling commands are supported to allow you to move parts of text around, or delete (or export) areas of the document, as one would expect on a word-processor. However, there is quite a surprising development in-store for users when they first of all use the block commands - you merely need to point the cursor to the start of the document and then you can use all of the normal cursor navigation commands (eg. ALT up to go to the top of a page, or even CTRL t to go to the top of the document), to move to the other end of the block (either above or below the start). What is more unusual however, is the ability to use many of the other menu commands whilst you are playing around with the block. This means that you can use the search command to find the other end of the block, or even where you need the block to be moved to.

Unfortunately for Qtyp users, the program uses all of the letter keys in conjunction with CTRL to allow quick alternative access to the various

commands, which causes problems when trying to access the Qtyp command menu. Even on the latest version of Qtyp, you can only configure the command window to be called by pressing CTRL plus a letter, meaning that when you press the given control key, Perfection tries to perform the command associated with that key and then Qtyp presents you with its command window. Although this is not Perfection's fault (after all there must be quite a few programs out there which use CTRL keys and do not allow their keypresses to be configured), it is most annoying and makes it very hard to use Qtyp in conjunction with Perfection. For those users who can afford the extra money, DP do supply a spelling checker program which can be used with Perfection (or other programs), but despite the advantages of this spellchecker compared to the various others on the market (speed, larger dictionaries,...), and even though the fault is wholly Qtyp related, I would have preferred that Perfection retained compatibility with existing accessories such as Qtyp, since I am now loathe to part with an additional £49.95 for a second spelling checker. Maybe someone will find a way of allowing Qtyp to be configured to use CTRL 0-9 instead!!..

Formatting a document

Perfection allows you to format a document in much more complex ways than Quill - the program supports Italics as well as Emphasised, Superscript and Subscript (although these fonts can be replaced by your own if you so wish), and allows you to use another 4 different type-faces (although these are only represented on screen by different user-defined strip colours), thus allowing you to utilise all of your printer's different fonts without destroying justification by the use of implicit control characters appearing in the text.

If you are at all uncertain as to the changes in type style which have been made within a line of text, pressing CTRL H allows you to view the current line on screen complete with all of its control characters (these are represented by special Perfection characters which can be translated quite easily using the list given at the back of the user manual). To make it even easier to check on the format changes within a line of text, the screen can be split using SHIFT F5, which enables you to see two views of the same document. You can alter the size and position of either window (as you can with all of the other main windows used by Perfection), move from one window to the other by pressing F5, and then move about independantly and alter your document from within either window. This makes cross-reference very simple, and when checking on format changes, you

merely need to split the main window, press CTRL H whilst the one window is 'active' and then you can see the line in both its normal (edit) mode and with all of the format changes shown.

The only thing you need to be aware of when formatting your text is to ensure that the margins and justification are correct before you issue the command to 'format paragraph'. Perfection does not remember the margins and justification for each paragraph, instead it formats the given paragraph to the current settings. It is however quite easy to just place the cursor to the desired places and press CTRL/ALT/L, CTRL/ALT/R, CTRL/ALT/I and CTRL A to set the margins, indent and justification.

The user has a much wider choice of how the text will be displayed when it comes to headers and footers than with Quill. Once you choose the header or footer command, then you are given a blank screen upon which to design it. You can have as many blank lines, or as much text as you like, repeated on each page, as well as the page number. The page number can appear in arabic; upper-case or lower-case roman numerals, or letters. To tell the program where these page numbers are to appear, it is necessary to enter the direct command mode (by pressing CTRL £) and then press P,R,S,A, or B in conjunction with CTRL. Unfortunately, you will need to refer to the manual to remind yourself which key to press for the desired page number format (I would have liked to have seen a reminder on screen). The only real problem here is that the status line does not display the current line or column number in the design footer/header mode, which makes it difficult to reset the margins if necessary. I would have liked to have been able to specify whether a footer was to apply to all pages, or to only certain ones (eg. to allow you to print 'Continued...' at the bottom of every page but the last one in a letter), but this is really a little too specialised to expect from a word processor.

Printing a document

When it comes to printing out a document, Perfection allows you to load any named printer driver before printing, specify the start and end pages to print (but not the start and end page numbers), and even whether only alternate pages are to be printed (eg. to allow you to have different footers on even pages). As with Quill, a separate program must be used to create the printer driver, although because Perfection can multitask, there is no need to exit Perfection before loading the program to create the printer driver (memory permitting).

The printer driver configuration program itself is very simple to use, with all of the instructions appearing on screen. Perfection is supplied with a standard Epson printer driver, and the printer driver program will load and amend a Quill printer_dat file into Perfection format, thus making the transformation from Quill to Perfection much simpler. Anyone who has used the Quill printer configurator will soon be able to use this program without any difficulty. You are first of all shown a screen showing the list of printer commands to turn on and off Underlined, Emphasised, Superscript, Italics and Subscript. You can also alter the baud rate, parity and end of line characters to suit your printer. Screen two contains the printer initialisation codes (oddly enough there is no ability to send a postamble in order to reset your printer after use); end of page code; and some of the Translate options as well as the codes to use for switching on the additional 4 strips (strip 1 should be left to switch off all other strips and revert the printer to normal printing mode).

The program displays the printer control codes in both characters and named codes (where applicable), however, if the current line of codes is too long to edit it in its full form (each control code is expanded for editing by inserting a comma between each code), the codes which are normally represented by names will be converted into decimal format. Provided there is room on the line (there is a maximum of 15 codes per command sequence), you can enter the codes in using decimal, hexadecimal or names. What is more, the program allows you to use up to 16 translates, which is much more versatile than the Quill printer driver, and should be more than enough for most people.

One QL user who I am in constant contact with has also discovered that the Perfection printer driver does not support the 'DEF' directive used by Quill. For those of you who have never come across this, it apparently is useful for printing Emphasised in NLQ on a STAR SG-10 printer, by telling Quill to print the 'n' BOLD characters in NLQ, then to send 'n' times CHR\$(8) (the backspace code) and then re-print the 'n' characters in NLQ. I wonder how many users actually need this, but thinking about it, it would appear very useful, especially with regard to old printers!

This is however only a minor shortcoming and the printer driver configurator's options should enable you to make the most out of your printer's abilities quite easily. It should however be noted (as pointed out in the manual), that if you wish your document to be have a wide left margin, then this margin is better set in the

printer driver rather than by using Perfection's set left margin command. This is not a failure of Perfection, it is merely that the program works a lot quicker if the left margins are set to zero for some reason!

In conclusion

Also included in the Perfection package are programs to allow you to strip all attributes and sort a file, and a program to allow you to insert pages from Professional Publisher. I have however not used these programs as yet, since I am still exploring the possibilities of Perfection.

A few problems do still exist with Perfection, but then I am certain that DP will continue working on it to ensure that these are sorted out. Overall, the speed-up on even a humble QL with Trump Card is amazing when compared to Quill (or any other wordprocessor). On top of this, the program provides many excellent and well thought-out features, each of which is easy to use. The user interface used by the program enables a user to quickly become acquainted with the program without having to delve into a 100-page user manual to discover how to delete a few characters!

I do not think that this program is quite yet 'Perfect' but it is certainly not far short of everything you need from a modern word-processor and is certainly years ahead of the competition on the QL (and even on many PCs). As time passes by, hopefully DP will take note of ideas sent in by users and make such improvements as are thought desirable to make this program truly unbeatable not only on the QL, but when compared to much more expensive programs running on the faster computers!

Rich Mellor

Update re v3.03.

Since sending in the above review, Rich Mellor has pointed out that v3.03 fixes 3 bugs that had previously been spotted:

- i) Paragraph reformat works even if the cursor is on the last line;
- ii) Works 100% with Pointer Interface
- iii) Ink/Paper oddities removed.

PERFECTION V3.03
£89.95 (256K MIN RAM, MDV OR DISK)
£129.95 (WITH SPELL CHECKER)
DIGITAL PRECISION LTD,
222 THE AVENUE,
CHINGFORD, LONDON,
E4 9SE

GOLD CARD - A LITTLE MIRACLE

After buying Miracle Systems "Gold Card" accelerator board from the recent All Formats computer show, I thought I'd write in to give you my impressions on it.

The Board

The board itself is around half of the size of the "Trump Card", but contains 2Mb of onboard Ram, the 68000 processor, Ni-Cad rechargeable battery (for the clock) and two other custom devices; one being the "Ingot" which is Miracle's own custom chip. Along one side of the board is the edge connector which mates with the connector inside the QL, and along the other side is the disk drive connector as well as a small gold heatsink (very classy!). The software included contains all of Tony Tebby's essential Toolkit II as well as ramdisk drivers, screen dump utilities and the new "hard" subdirectories code. Installing the board is very easy - it simply plugs in the expansion slot on the left-hand side of the QL and resides entirely within the QL itself. The board apparently takes less power than the Trump Card, and the heatsink gets warm but not hot.

The Memory

Although not all of the 2Mb of RAM is available to the user, upon reset I get about 1.88 Mb free by using the "print_free_mem" function included with Toolkit II. The toolkit is enabled with the "Tk2_ext" command, as with the Trump Card. So, how much is 1.88 Mb of memory? Well, I run QPac II and can run two full 667k versions of Conqueror and still have free memory. My boot disk loads in Lightning (all extensions), Turbo runtime extensions, makes Conqueror, Editor SE and the GST Sinclair Assembler all resident and I still have about 1.3 Mb free. One of the many great things about the QL is that most of the software is written to be size and speed optimised - so to suddenly have bucketfuls of both speed and memory means that the user benefits to the maximum.

The Processor

The processor used on the board is a 16 MHz 68000, a processor with a full 16 bit external data bus as opposed to the QL's 8 bit bus and running at a clock speed of over 2x the speed of the QL's clock. This means that ALL software should run at a minimum of 4x faster, but I have found that the only thing which runs 4x faster is SuperBASIC - most other things run 5x to 7x faster! Some timings are shown below:-

Drawing the Mandelbrot set using MANDEL_E from the Quanta library took 7 seconds, as opposed to 28 seconds on my Trump Card.

Compilation of a simple C program under Conqueror took 45 seconds as opposed to 5 minutes with my Trump Card.

"PC Tools" running under Conqueror claims that I am running at 310% of the speed of a standard PC. This is obviously false, but I could only obtain a figure of 80% with the Trump Card.

Ralf Beidermans "Life" can now perform over 6000 generations per second, averaging at about 25-30 generations per second on a full screen of life.

It must be said that the speed increase is the most important feature of the board in my opinion. The text printing speed on Text87 is now silky smooth, with scrolling up/down text being made considerably quicker. As I said previously, I am now a user of QPac II and find the pointer environment provides an easy to use and powerful environment. I was worried that pointer movement would be also accelerated, thus making it unusable. This, luckily, is not the case due to the pointer being interrupt driven (according to Miracle); an example of correctly written quality software as one would expect from Tony Tebby. Unfortunately, not all pointer software falls into this category and my favourite draw program "The Painter - Progs" runs unusably fast. The cure for this is to multi-task 2 or 3 copies of the Painter to slow the program down. I think that my version of The Painter is fairly old (V1.03) and so this may have been corrected now - I would like to know if it was worth applying for an upgrade. It would be nice if Miracle had included some function to slow down the operation of the processor. The only problem that extra speed should really cause would be with games, of which the QL is not over endowed!

Extra Facilities

As well as Toolkit II, ramdisk drivers and screen dump utilities, Miracle have also provided the software to handle "hard" subdirectories. The QL has always had pseudo subdirectories (by calling a file flp1_letters_cgh you are placing the file "cgh" in the "letters" subdirectory), but upon a "dir" all the files are shown on the disk. The Gold Card includes the "make_dir" command which allows you to turn flp1_letters_ into a proper subdirectory by typing "make_dir flp1_letters". Now when "dir"

is issued, all the files in the letters directory are not shown; instead a "letters ->" is printed to show that a subdirectory is present. This system allows files to be kept tidily on the storage medium. Finally, the disk-drive controller can now handle drives upto 3.2 Mb capacity and so will handle both 720k and 1.44 Mb disk formats. Does this mean that the QL could now read the 800k disk formats of the Amiga and Archimedes? I hope so!

Incompatibilities

With all this extra power and memory, you would expect a few programs that would refuse to run. The only program which has caused the machine to crash so far is Ralf Beiderman's "shape" demo. Conqueror has also lost the format command of MsDos, giving a "Bad track 0 - disk unusable" DOS error. This is not too much of a problem though, as XOVER (supplied with Conqueror) can be used to format PC disks. And that's it. Over the last week I've been manically trying all my software on the board and those are the only two problems I have encountered. Apparently Taskmaster and Quill also have had problems, but I use neither and so can't comment on these reports.

Conclusion

The Gold Card breathes the same amount of life into your QL as adding a Trump Card to an unexpanded QL does. Using Conqueror is now exactly like using a PC, only it multitasks! All QL programs benefit from the raw power increase, using Lightning makes things run even faster still. The memory is adequate workspace, and linked with a good front end the QL is competing with the larger machines as a powerful workhorse.

Andy Dean

The Gold Card from Miracle is just what the QL needed. The speed increase is dramatic to say the least. It transforms the QL from a slow unresponsive computer, into a very quick and responsive machine.

I ordered a Gold Card in advance of its release, being promised a delivery sometime in early May, mine arrived on the 10th May, having been posted a day earlier. I cannot praise Miracle enough as regards delivery, whether Trump Cards or disc drives they always delivery within four working days to me, living in Belfast. Compare this to Digital Precision, I am still awaiting delivery of Perfection after placing an order in December 1990. (It should have arrived by now - although the Spell-Checker may still be unfinished!)

Down now to real subject - SPEED that's what the Gold Card is about. The Gold Card has a Motorola

68HC000FN processor running as 16 MHz at its heart. There is 2 MegaBytes of memory contained on just four chips. On power up the QL appears to do two resets, and these are fast resets, not like a 896 K Trump Card under JM/JS ROM. After the second reset there is an increase in memory to 1920 K. The other 128 K is used for ROM shadowing. The QL ROM, any ROM in the ROM socket, and the Gold Card ROM is copied into the Gold Card's fast RAM. The processor then has access to full 16 bit wide memory for all operations. The board is very neat in design and construction. Despite the fact that my board is a relatively early production one, there are no visible wire links, more than can be said for the QL. The board fits into the expansion port at the left of the QL, and the Gold Card heatsink is the only part which protrudes. The figures below give some indication of the difference in speed. The times where obtained on the following set-ups.

1- QL with Minerva V1.82, 896 K Trump Card V1.31

2- QL with Minerva V1.81, Gold Card V2.09

Time from when Conqueror asks for MS-DOS bootable disc until A prompt is display. This time can be reduced by taking commands of the CONFIG.SYS and AUTOEXEC.BAT files. Using PC-DOS 3.30.

Trump Card 94 seconds Gold Card 48 seconds 1.96 times faster with Gold Card

Time to complete a null FOR/NEXT loop (1000 times) in GW-BASIC V3.23.

Trump Card 23.24 seconds Gold Card 5.15 seconds 4.51 times faster with Gold Card.

Time to complete CHKDSK on DOS system disc.
Trump Card 25 seconds Gold Card 9 seconds 2.78 times faster with Gold Card

Time to load 2200 word document with Quill V2.3, with prompts turned on.

Trump Card 14.13 seconds Gold Card 4.14 seconds 3.41 times faster with Gold Card

Time to complete a null FOR/NEXT loop (1000 times) in SuperBasic.

Trump Card 1.70 seconds Gold Card 0.40 seconds 4.25 times faster with Gold Card

Using Quill on the QL with the Gold Card is no longer a chore. The cursor scrolls quickly through blocks of text. The SEARCH/REPLACE function works very quickly. It is now very difficult to 'lose' the cursor.

I would recommend anybody thinking of 'downgrading' to a PC to think seriously about the difference Gold Card will make to Conqueror. It does not offer the speed of 386, but as long as you are not concerned about running Windows 3, the speed will not be a big handicap. 3D Battle Chess is now playable on the QL, though not as fast and as entertaining as on a fast PC.

The Gold Card has an inbuilt real time clock, the battery of which should last for about two years. STC Electronic Services sell replacement cells for about £2. The Gold Card supports three disk drives, or four using a modified 'Disk Adaptor'. The drives can be 5.25" 40 track (360K), 5.25" 80 track (720K), 3.5" 80 track (720K), 3.5" 80 track (1.44Meg) and 3.5" 80 track (3.2Meg). I would be interesting in seeing an example of this latter drive type. I know that TEAC manufacture this type of drive but I have not seen them advertised anywhere. 5.25" 80 track (1.2Meg) drives as used on PC AT's are not supported because of the fact that they rotate at 360 RPM, unlike the other types of drive mentioned. Miracle hard disc users will be glad of the inclusion of the 'WIN_REXT' in the Gold Card ROM.

I have just received (15 June) a free upgrade ROM from Miracle. This new ROM, version 2.13, corrects two bugs which I was suffering from. Previously I could only use three disc drives with a Miracle 'Disk Adaptor' in place. The new ROM allows the drives to be 'daisy-chained' which reduces further the protrusion at the QL's expansion port. I was also having a problem with Quill. After Quill was 'booted' from flp1, a document could only be loaded from flp1, no other drive would be recognised. According to Miracle this problem was due to the fact that Quill grabs all the available memory on start-up, and does not leave space for the disc drive physical definition block. Since installing V2.13 I have had no problems with Gold Card.

I have read that some people are claiming that Gold Card is not compatible with Minerva. I have used Minerva V1.81 and V1.82 with Gold Card V2.09 and V2.13, and I have not had any lock-ups due to Minerva.

Despite the £375 price tag which many will find off putting, I would strongly recommend the Gold Card to anyone who uses their QL for any purpose. After using the Gold Card for a few days, my second 896K QL has been put out of sight, and is now only used as a dedicated file server.

Keith Johnston - 17 June 1991

EDITORIAL COMMENT

I'd like to thank our correspondents for their comments on Gold Cards. Apart from some early problems with the ROM software, Miracle now seem confident that they have no major problems with the Gold Card to sort out. One tip I did get from Jeremy concerns programs which cause disk drive (or microdrive) lights to remain on after the program has finished loading. The problem seems to be caused by the program LBYTE-ing then immediately calling the code. Often this code (especially in games) grabs the Scheduler which stops the necessary Interrupt being generated which would normally turn off the drive lights. If you're lucky you can solve the problem by inserting a pause 100 (approx) between the LBYTES and CALL commands in the Boot program. Programs which EXEC can also cause problems. These will need to be amended by the authors so that they introduce a slight delay (2 seconds) before proceeding with the

program to give the QL time to turn the drive lights off.

More comments on Gold Cards are very welcome. Don't forget that you can claim a discount on the price of a Gold Card if you trade in a RAM expansion and/or disk interface. See Miracle's advert for details.

Richard.

THE AMSTRAD STORY

"ALAN SUGAR - THE AMSTRAD STORY", BY DAVID THOMAS published by Century, hardback 366 pages.

I feel this book will be of almost as much interest to Sinclair enthusiasts as to Amstrad devotees. It covers at reasonable length the deal between Sir Clive and Alan Sugar, revealing quite a lot of background information about the deal not disclosed in the Press at the time. Of equal interest are the passages which show why Amstrad succeeded in consumer electronics while Sinclair and others fell by the wayside.

"I thought Alan Sugar was an ideal person to take over my Spectrum computer business. He knew what was needed by the customer. He was very, very perceptive. And he knew where to get the product made efficiently." Sir Clive Sinclair.

This quotation sums up the essence of the Amstrad phenomenon, whether in the field of computers, hi-fi, CB radio or video recorders. Sugar could spot a market opening, design a product with all the bells and whistles ("a mug's eyefull"), produce it at low cost, set a price based on cost rather than what the market could bear and advertise the product to "the truck driver and his wife".

The QL rates a one line mention - the reason why it was dropped by Amstrad is not considered important by Thomas. Examination of the reasons why Amstrad succeeded with the CPC 6128 and the PCW8256 help reveal why Sinclair failed with the QL (as far as a mass market was concerned).

This book serves as an adequate history of the Amstrad company from the 1960's to date, but is perhaps less satisfactory at covering Sugar's private life - which is not surprising as he is not generally a publicity seeker and has given magazine interviews only when he has perceived a likely spin-off in terms of product sales. I expect very few QLTR readers will actually buy this book, but it may be worth while ordering it from the local library.

MICHAEL L JACKSON

BASIC REPORTER

If your SuperBASIC programs ever get out of hand and require a serious hack, you may wish to engage the services of the Basic Reporter. This Roger Cook of the QL scene aims to spill the beans on your BASIC programming.

The program, one of the first to be released on Dilwyn Jones' own label, consists of a selection of options to shed light on the content and operation of SuperBASIC programs.

This review, and indeed Basic Reporter itself, assumes a good working knowledge of SuperBASIC. If it all seems too technical, you would be well advised to first work through Jan Jones' book, QL SuperBASIC - The Definitive Handbook (currently available through QUANTA), in order to make best use of the information that Basic Reporter provides.

To get you started, a boot program is supplied for loading up this Turbo-compiled utility. It first loads in the Turbo runtime extensions, as well as another short file of machine code extensions, then executes the main program. Basic Reporter multitasks alongside BASIC, as it is designed to work on the currently-loaded BASIC program. Therefore, once it has loaded, you need to press CTRL-C to get the program going.

However, unless you are keen to study the Basic Reporter boot, you should first load in your own BASIC program. It is possible, indeed preferable, to RUN the program before starting, but beware if the program uses any RESPR statements, since the interpreter will object to them while the Reporter task is running. (The best answer is to replace RESPR with the TK2 function, ALCHP. Otherwise, ensuring the relevant extensions have been installed, LOAD the BASIC

program first, RUN it until the RESPRs have been performed, then break and use "EXEC flp1_reporter_task" to execute Basic Reporter.)

Once loaded, Basic Reporter presents a single menu of 20 options. Each can be accessed by highlighting with the cursor keys then pressing the spacebar to confirm. In addition, each option is assigned a single letter, and pressing the appropriate key acts as a short-cut for accessing that option.

The first option is ARRAYS LIST, selecting which will bring up a report on the arrays used in your program. As with all the reports, you have to choose whether or not to sort the names alphabetically and where to direct the output (e.g. to screen, printer or disk file). In this case, the array names are listed, along with the type of array (i.e. integer array, string array, etc.).

Next on the list is BASIC VARIABLES (ALL), which will list all the BASIC variables used in the program, regardless of type or whether they are set or unset.

Another option allows just the unset names to be specified. It is worth noting that if your program includes a line such as: "LBYTES flp1_font,addr", then flp1_font will also appear as an unset variable. This can be avoided by putting the filename inside quotes.

FOR LOOP and REPEAT LOOP names can also be reported on separately, but make sure you have RUN the BASIC program first, as the names do not seem to be listed under these categories before running.

Some of the most useful facilities offered by Basic Reporter are the reports on PROCedures and FuNctions. These can

be used to produce alphabetical listings, complete with the starting line number for each PROC/FN. A printout of such a report is very handy to have when trying to locate a particular PROC/FN in a large program.

Another option details all the calls made from within a specified PROC/FN. It is not necessary to enter the precise PROC/FN name to search the program for, since you can choose between an exact match, any name starting with the specified string, or any name containing that string. Thus, by entering "init" and choosing the second option, you could get reports on PROCs called "init", "init_arrays" and "init_windows". It is also possible to restrict the search to a specific range of line numbers, which can speed up the process.

The same string matching procedure is used in the REPORT ON NAME option, which will identify the chosen name (if it exists) and report each line on which it appears.

Among the other options are a memory report and a sort of enhanced version of TK2's EXTRAS, which also lists the start addresses of the extensions. It is useful to sort this list alphabetically, although it takes a while, so that you can see how many times a particular keyword has been duplicated (by TK2 and Turbo Toolkit for example).

The final item on the Basic Reporter menu is TRACE. Selecting this returns you to BASIC and prints the current line and statement numbers near the top right of the screen. (There doesn't seem to be any way of moving the TRACE window.)

When TRACE is active, the BASIC program will run appreciably slower. In MODE 8, it is just about possible to follow the changing line numbers in the TRACE window, but in MODE 4 with Lightning active, they zip past at a great

rate of knots. Using CTRL-F5 will freeze the screen display when required, but it would be much easier if a single step mode had been incorporated. However, it is possible to alter the speed of TRACE by changing the "reporter_task" or SuperBASIC job priorities.

While testing out one program with the TRACE option, I was surprised to see the initial line number appearing frequently, even though I was certain that all the action was going on at the "top end" of the program. After some investigation, this seems to have been a side-effect of READING DATA statements, so it is necessary to keep this in mind when trying to make sense of a trace.

One final point - it is important to make sure that SuperBASIC has an active cursor before switching (using CTRL-C) into Basic Reporter, as it is difficult to return to BASIC otherwise.

Overall, Basic Reporter achieves what it sets out to do. Lots of useful information can be gleaned on the innards of BASIC programs, and the reports themselves are clear and neatly presented. The only thing that seemed to be lacking from the program was any kind of report on channels. However, the package as it stands, including an indenter program and some text-formatting extensions, is well worth the sensible asking price, and can be recommended to all SuperBASIC hacks.

Alan Pemberton

BASIC REPORTER
£10 (FLP) £12 (MDV) 128K MIN
DILWYN JONES COMPUTING,
41 BRO EMRYS, TAL-Y-BONT,
BANGOR, GWYNEDD
LL57 3YT

DISK INTERFACES

In QLTR 4, we made an initial, and not wonderfully successful, foray into the world of disk drives and disk interfaces. One of the interfaces mentioned, for which there are very little information, is the Dattel interface. Below are Tony Firshman's notes. More info welcome on this subject! I've also added some comments on my experience with MGT Lifetime drives and a couple of other notes.

DATTEL DISK EXPANSION

These were single sided drives and i/f sold by DS Enterprises (Devil rest their souls). They are quite functional, and I even had a last minute job to patch the rom to convert from fdk to flp, and allow some commands to recognise u/c parameters. It has been found that some have J1 connector 30b and 31b soldered together. This seems to damage the QLs 8302. Recommended action is to remove this link.

Any other data would be welcome.

Tony Firshman.

If anyone needs any help with the Sandy SuperQBoard, I can put people in touch with Keith Mitchell, as he has delved very deeply into these and is willing to put his expertise at other's disposal.

Also in Feb 1991 QUANTA mag is news that Ron Allpress has revised the QUEST disk interface code and this will be placed in the QUANTA Library.

A few words about the MGT Lifetime Disk Drives sold by EEC Ltd. Recently my old twin 3.5" drives started producing rather a lot of errors. So, my first idea was to pack them off down the road to be repaired - 5/6 weeks I was told (an underestimate as it turns out!). As that was far too long for us to be without disk

drives, I decided that I'd better order a twin set pronto - a nice new set to boot! (multi-pun intended!)

So far so good, the drives were duly sent after payment by Access (only to be delivered to the shop next door where they were then lost for 10 days) - but eventually I got them, unpacked them and tried to get them working. Here was my first surprise - not a twin unit but two single units, each cased in a double - unit height box, each separately powered. So the drives are twice the height of the old ones and take up an extra power socket.

Well, I examined the drives, sorted out the dip-switches so that one was drive1 and the other drive2, plugged everything in and waited. Sadly - only one drive seemed to work. The other, even though properly connected and switched on, refused to acknowledge that there was a disk in the drive. Was it the lead's connector - no, because the same drive gave problems as both drive1 and drive2. In despair I phoned EEC Ltd, and was informed that there had indeed been a batch of drives with dodgy drive connectors, and that I should return the offending drive.

Duly packaged up the drive was returned and I settled in a wait, in the meantime copying disks with just the one drive. After a week or so the replacment drive arrived. On extracting it from the box the first thing I noticed was that the mains plug had one of it's pins bent at an angle of 30' and that it wouldn't fit the mains socket! Well this was corrected, with EEC's permission, by cutting off the offending plug and wiring up a new one (the bent pin having proved rather tough!). I plugged everything in - and once again there were problems - the drive refused to acknowledge that there was a disk in the drive. Further inspection of the drive

NETWORK HINTS

unit revealed that the rear had been stoved in, and when placed in the packaging, it became evident that at some stage the box had been dropped on its end, crushing the mains plug against the rear of the drive unit. (I have to say that the design of the packaging internally is very poor and gives very little protection in the event of the box being dropped on its end.) The drive was sent back to E.E.C. for them to replace and possibly reclaim damages from the carriers.

Anyway the fourth drive unit eventually turned up undamaged. I had this installed for some time and I can't say that I was impressed with its reliability. Whether in drive1 position or drive2, it too suffered from the "wot disk?" syndrome - the lights are on, but there's nobody at home. But not all the time - some days it worked perfectly, but other times, I had to disconnect and reconnect the drive three or four times before I could have both drives working. (Note that the initial drive has worked 100% every time I've used it. But the other three have all proved difficult.)

Eventually I got so fed up that I arranged with E.E.C. Ltd that I could return the MGT drives as they were giving me so much grief, and so I eventually got my money back. As for the original QL drives? I picked them up after 3 months from the computer shop where they were supposed to be being repaired, where they told me that they could find nothing wrong with them, suggesting that the unreliability which I had suffered might have been caused by condensation in my cold wintry office. Since then they've worked perfectly. Strange, but true! (Not to mention tempting fate!)

Richard.

I am no 'real' expert on this matter so would welcome others' experience.

A must is Tony Tebby's toolkit II IN ROM on all QL's in network. This gives file server facilities amongst others.

A useful addition is two jack plugs each with a 330ohm resistor soldered inside cap. This should be used as a terminator at each end of the network, as the QL sockets are poor quality, and the two empty sockets often don't close.

Issue 6/7 boards usually give no problems. As Tony Tebby has said, more issue 5 boards network than is commonly thought.

The network is not handshaked, and requires precise timing.

With two QLs, call them BOTH net 1!

The network often doesn't recover from bad medium errors - and gets into a continuous loop on file server. In these cases try CTRL SPACE on the QL requesting data.

If QLs fail to network try the following:

Use two 8301s from same batch (ie same date code (eg 8550). I use two 8301s with high precision 15.000000 oscillator.

If there is a failure at file server end then files can be left open. If you have QRAM, try closing the channel.

Often powering down BOTH ends can restart the network, or rjob'server' on other machines and then fserve again.

Remove centre pin of 7805 reg, and solder small diode (eg 1N4148) NON-bar to 7805 and other end in socket. Remove all main chips and power up with oscilloscope (or voltmeter) to check that 5v rail is not more than 5.5v.

EASY POINTER

I have found two network leads where the plastic moulding was too long. Cutting a few mm off allowed the jack plug centre pin to make proper contact.

Tony Firshman

EDITORIAL

I'd like to thank Tony for kindly sending his notes on Networking. As he says, he'd like to hear of other people's experiences. One way of testing whether one of two QL's is at fault is to install Di-Ren's Network Prover (or even your own homebrew version) which tells you whether anything is passing down the network wire by lighting up a little LED.) I have found that most of the QL's I have had Network, although installing Toolkit II is an obvious move to improve reliability (but it can't get round malfunctioning hardware). Minerva ROMs also have improved Networking capability compared to earlier, Sinclair, ROMs. There is currently very little software that makes much use of the network - apart from Fleet Tactical Command from Di-Ren, which is a trifle strange considering that most QL's have been supplied with a networking lead. (Although early unreliability problems probably put paid to some projects.) Meanwhile, I can recommend Sanjay Marwah's Network Manager program from both the QUANTA Library and the CGH Services PD Library for people wishing to explore Networks, once the hardware is shown to be working. Hopefully there'll be more on this subject in future issues.

Richard.

A look at the Easy Pointer (Easy*) development system.

"Qptr?! EEEK!" (anonymous QL programmer).

The adverts suggest that if you find Qptr difficult, buy Easy*. I bought Easy* because all I ever managed to do in Qptr was a simple Circles programme in SuperBasic and a little information filter in assembler. The prospect of not having to "bother with many lists, arrays & setups to get a window" was too much. After a long wait, Easy* arrived.

It consists of one manual, one disc, all for £39. On the disc are 3 toolkits (easyext, easyptr and easymen), 3 jobs (easysprite, easymenu and easysource) and 4 SuperBasic demos. It also uses Jochen Merz's menu extension 'Menu_rext' which means that filenames should never be a problem.

Qptr should not be thrown away. The Easy* manual is "a detailed description of the EASYPTR Development System" and its explanation of what WMAN & PTR_GEN do is no substitute for Qptr. It is rather Germanic, referring to hardware/software configurations as "constellations". The manual is spiral bound and looks as if it has been photocopied onto recycled paper. It should have been supplied in an A5 ring binder.

Qliberator is needed for serious Easy* use from SuperBasic. If you are only going to use Easy* for assembly progs then Qlib isn't needed. For years QL Forum has been Turbo-country but it looks as if Turbo will never be updated to either (a) allow use of BP.LET or (b) have machine code files added to its output jobs or (c) produce rommable jobs. Time to hoist the Liberator flag.

Easy* produces menu definitions and sprites in the binary format of the Window manager and Pointer Interface. This is a welcome change from Qptr SuperBasic progs where you have SuperBasic eating its way through massive lists of DATA statements calling MK_LIL, MK_WDEF, MK_TEA etc.

Now, in Easy*, all you have to do is run EasySprite, EasyMenu and define your sprites, windows and menus. The window ~definitions are saved in files ending with '_men', sprite files end with '_spr'.

If you are programming in SuperBasic, this

drastically reduces the size of your source code - to load a menu a MDRAW command is used, to use menu sub-windows (eg the file lists in the Qram/Qpac2 FILES menus), simply prepare an array and use MAWDRAW. You can then start acting on pointer input via the function MCALL. This is much faster than using Qptr.

If you are programming in assembly language, you will have to use EasySource to turn _men or _spr files into _asm files. You will then have to update pointers so that your routines get called.

Is Qptr needed? I won't be selling my copy. Qptr is a reference manual to the PTR_GEN/WMAN structures and its concepts section would be useful in explaining what a managed window is made up of. The Easy* toolkit routines seem to complement the Qptr SuperBasic toolkit, rather than replace it.

The EasyExt toolkit is a little gem (not to be confused with a little g.e.m). It is a series of routines to load code or data into the common heap or jobs area, remove a common heap block / job and disconnect any toolkit commands, device drivers, low level tasks that were present in that area. Previously, if you did an RJOB on a job that was closely linked into the QL (ever tried getting QL Bounder to run as a job?), you ended up with Sysmon wailing and your QL crashing. Now you just use RXJ and Zap! The job is removed painlessly. The command RJOB is redefined as RXJ and the command LRESPR is redefined so that it will use the common heap instead of RESPR if it is unable to allocate RESPR space. There is a self contained 'RXJ' job on the Easy* disc, similar to the Qpac2 RJOBS menu. (I wonder if the compiled versions of the Easy* demos can be given to other QL users as they could be quite useful and would be good advertising for Easy*).

The most important job is EasyMenu. The manual devotes 11 A5 sides to it and even then it sticks to terse descriptions. I found it nice to work with but still with a few rough edges. If you have a menu on screen, it is rather hard to find out what it is made up of. This is solved by running the menu through EasySource but that is hardly the best way to find out 'how many information sub-windows have I defined now and where are they?'. This kind of information is less relevant to SuperBasic programmers but I suspect assembly language programmers will want more detail.

An important feature of EasyMenu and EasySprite is the ability to add their menus and sprites to runtime versions of the EasyMenu and EasyPtr toolkits. This facility is a bit rudimentary though

- you cannot remove files once you have linked them. Easy* SuperBasic programmes would normally do a MDRAW #ch%;'flp1_filename_men'. It would be tidier to keep the menu data with the job. So if you have Qlib you can produce a copy of easymenu_cod+all your menus and have it built into your job.

There is a heavy price to pay for this 'volvo'ing of your job though. You won't experience the "I can't find my menu device blues" or the "Hey you haven't loaded easymen_res yet!" blues. The size of the job file increases dramatically. It is built like a tank.

easymen_cod 9482 + rxj_men 862 = 10352 bytes

There is a slight overhead for the menu names etc. With easymen_cod being so big, it would be worthwhile to be able to have only the menus linked into the job file - otherwise there is nearly a 10Kb overhead before we have started.

On top of that, for each sub-menu you have, you will have a separate _men file. So if you have a primary window with two sub-menus, you have three _men files to append to easymen each time you alter one of the sub-menus. This calls for a little SuperBasic programme to take a copy of easymen_cod/easypr_cod and a list of menu/sprite files to append to it.

The EasySource job takes binary files of sprites or menus and turns them into assembly language. It is quick and seems to work. I have not looked at using Easy* from assembly language yet and so cannot comment further.

The EasySprite job is an improved sprite editor - it can handle dynamic sprites as well as normal sprites.

Ian Bruntlett

EASYPTR II
£49 (EXCL VAT E&OE, £4 P&P)
JOCHEN MERZ SOFTWARE,
IMSTILLEN WINKEL 12,W,
4100 DUISBURG 11
GERMANY

SPECTRUM SCREEN TRANSFER

The program on this disk allows you to transfer a Spectrum screen to a MODE 8 QL screen, via a suitable RS232 lead.

You will need:-

QL
ZX Spectrum with suitable RS232 interface
QL to Spectrum serial lead

My Spectrum is fitted with an Interface 1 and so a suitable wiring diagram for the connecting lead is supplied later. I think that it would be possible for the ZX NET to be used rather than the RS232 in some cases, but my Spectrum and QL refuse to talk to each other down the net. (See below.)

THE LEAD

For a QL to Interface 1 lead to be constructed, a 6 pin phone connector, 9 pin male DIN plug and 5 or more core wire is needed.

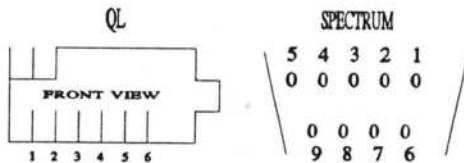
Wire the TxD on the QL to RxD on the Spectrum,

RxD	"	TxD	"
DTR	"	CTS	"
CTS	"	DTR	"

and wire the two GND pins together. Do not connect the two positive voltage rails together as they are at different voltages. I used SER1 on the QL with no problems.

N.B. The phone connector will not fit directly into the SER1 socket, you must remove some of the plastic from the surface with a knife. (Note that Dennis Briggs can supply bona fide QL serial connectors which should avoid any problems with ill-fitting phone connectors.)

WIRING DIAGRAM



1	Connected to	7
2	Connected to	3
3	Connected to	2
4	Connected to	5
5	Connected to	4

For a clearer picture of the ports, see the user guide.

THE PROGRAM

The Spectrum program used to send the data is:

```
10 LOAD "<filename>" SCREEN$
20 SAVE "b" CODE 22528,768 : REM
   Save Attribute Area
30 SAVE "b" CODE 16384,6144: REM
   Save Screen Area
40 STOP
```

The QL program is written in C for speed, but the BLOCK command needed to plot the pixels means that the min. time for a screen to be sent is kept at about 2 minutes. To run the QL program use EXEC_W flp1_specscreens_exe and press ENTER at the prompt. Ideally the QL program should be EXEC'd first and when the screen is cleared the Spectrum program should be RUN. I found no problem with the serial ports operating at 9600 baud, but if problems do occur the baud rate should be decreased.

MISC.

This program was written for two reasons, the main one being that there are a large amount of good graphic screens on the Spectrum which could be used as clipart on the QL, if only they could be transferred across. The second reason was an experiment in sending data down that ZX NET which got side-tracked into sending data down the RS232. It is conceivable that if the Spectrum has a disk system, the screens could be saved to disk and the data could be read off the disk by the QL. This would eliminate the need for both the Spectrum and QL to be on simultaneously. (Assuming that the Spectrum disk format was compatible with the QL - very few are!)

It is obvious that this is a specialist

project, and should only be attempted by someone confident of what they are doing. If anyone is interested, write to me c/o C.G.H. Services.

Andrew Dean

EDITORIAL COMMENT

As ever we accept no responsibility for damage you might do to any equipment whilst attempting to implement this or any other project. The program is in the C.G.H. Services P.D. Library together with a disk full of screens grabbed from the Spectrum, to prove it can be done.

We have also been sent a copy of the "Specload" program, which is now in the Public Domain Library. Andy has tested this, but without any documentation it is rather difficult to evaluate it. This takes the data in from a cassette recorder into the QL via the network ports.

Another program along the same lines was supplied by Gilsoft as part of the Quill Adventure Writing system for the QL, but I don't know anyone who has tried it.

Finally comes news that people in Birmingham have witnessed a real-live Spectrum emulator running on a QL. It ain't fast, but works very well indeed. Don't know yet whether this is ever intended to be a commercial proposition or for the P.D. Library. Given the fact one can hardly give Speccies away these days and that similar Public Domain emulators run on many other computers (including the ST and Amiga) I wouldn't have thought that there was much mileage in a commercial program. But I've been proved wrong before.

Richard

As far as I can tell, this package from Tony Tebby has not been actively advertised since 1988. More recently it has appeared as a one-liner in Care Electronic's regular QL World advertisement, giving no real indication as to the features it offers. Some QLTR readers may be totally unfamiliar with the package, so this review should help to bring you up to date. I have been using QTyp while preparing articles for this issue of QLTR because I expected more errors to creep in due to my lack of familiarity with the new IBM type keyboard. So far I feel it has been a success, and a considerable improvement on Eidersoft's QSpell which I used to use.

A MAJOR QL SOFTWARE PACKAGE

The QTyp package consists of a number of programs which use the QJump Pointer Environment, i.e. in the style of the QPac programs, plus a number of Superbasic extensions which may be of use apart from with QTyp. The main programs are as follows:

QTyp_Add is used to add a pre-configured version of QTyp to your boot file, allowing it to be loaded with Quill, The Editor, Micro Emacs or Text 87 for instance.

QTyp_Config is used to set preferences for checking, dictionary filenames and devices (e.g. WIN1_ rather than FLP1_). QTyp is the multi-tasking spelling checker, which can run alongside most types of QL programs which involve substantial text input; it is not limited to being used with Quill.

QTyp_Ded is the dictionary editor, which allows modification of the supplied 46,000 word dictionary or creation of new specialist dictionaries. Assembly language programmers could create a dictionary to check input of

program source into, say, the Metacomco QL Editor. There are numerous potential applications for this suite of programs.

Qtyp_File is a program used to check documents or text files you have previously saved, in a similar way to QSpell which could only work with saved Quill_DOCs.

In addition, QTyp is supplied with the Hotkey System II, which helps achieve real multi-tasking on an expanded QL. This is supplied with a separate manual, which gives examples of the use of the system's Superbasic extensions. It is not necessary to read this manual in order to use QTyp. In effect, Hotkey is a valuable extra supplied with the typing checker, which achieves more than several other multi-taking utilities from rival suppliers that you would have to buy separately.

Unlike other spelling checkers I have seen, QTyp is a major software package offering the user several modes of spelling checking and the ability to multi-task Psion and other programs.

THE MANUALS

QTyp comes with two A5 spiral bound manuals, of 18 pages for QTyp and 12 for Hotkey System II (which is an unadvertised bonus). Tony Tebby is by no means the world's greatest manual writer, but these seem to be an improvement on some earlier offerings. The pages and font are larger than the TK2 manual, so they are easier to find on the bookshelf and to read. The QTyp manual is logically laid out, starting with an introduction to the package and a description of the files on the disk, then continuing to describe the use of the installation (QYP_ADD) and configuration(QYP_CONFIG)programs. The following pages describe using the program to check as you type, or to

check previously saved files and the editing of the dictionary. At this point - page 8 - the average user need read no further, because the rest of the manual is a technical discussion of accessing the QTyp features from Superbasic and assembly language. You only need to understand this section of the manual if you propose writing your own spelling checker or word processor with built-in spelling checker (like Text 87 version 3).

Once you have installed QTyp alongside your favourite text editor, there will be little need to refer to the manual as use of the program is largely self explanatory. Options are selected by moving an on-screen pointer by mouse, joystick or cursor keys or by taking the short cut and pressing the first letter of the command. It is easy to ESC from commands if you have made a wrong selection, but it is fairly clear what an option is going to do.

CONCURRENT CHECKING

Most users will want to operate QTyp in the mode offered by Spellbound, that is, concurrent checking of your typing. Having booted up Quill or Editor, press ALT-T to load QTyp. Its command window will appear over the text editor you are using - at this point you probably only need to press ESC as the defaults are quite sensible as far as I'm concerned. As you type words QTyp recognises a high pitch beep sounds from the QL's speaker. Once the program spots a combination of letters it does not recognise, the tone changes to something approaching a raspberry, giving you the opportunity to correct the word before completion. When you have completed an unrecognised word a small window pops up telling you it is an Unrecognised Word, displaying that word, and offering the following courses of action:

- F1 List
- F2 Save
- F3 Commands

ESC

If the word is correct but unlikely to be used again in a document you might as well press ESC to continue typing. Otherwise press F2 which saves the word in a temporary word list in memory, so that it will be recognised if you use it again further on in the document. From the commands menu it is possible to save this temporary word list to a disc file which can then be merged with the main dictionary at a later stage by means of the dictionary editor program. Pressing F1 calls another window which can be used to list words in the dictionary, hopefully enabling you to find the one you meant to type. If the correct word appears in the list provided by the dictionary, move an arrow to the word, press enter and the program rubs out the incorrect word and replaces it with the correction.

You can call up the word list at any time by pressing CTRL-W, which may help if you cannot think of the right word to use. As QTyp allows notes to be added alongside the words, it should be possible to modify the dictionary to make a thesaurus, giving a few alternative words when you find yourself repeating words too often.

CONCLUSIONS

In the relatively short period I have been using this package I have not encountered any major drawbacks. It can keep up with my fastest two fingered typing, even with the new keyboard. The dictionary is of an adequate size (at about twice the size of that supplied with QSpell) and can be expanded easily (which QSpell's couldn't). Overall the package is excellent value for money for owners

of expanded QLs with a disc drive. If you attend QUANTA workshops you might even get it at a bargain price compared to the usual advertised mail order price. Care Electronics sometimes attend such workshops and other computer fairs, so I was able to buy the package at a special show price of £23 at Portishead in September.

Michael L Jackson

C.G.H. Services is in the process of porting over from the ST an 80,000 word English word-list that can be used for a Spell-Checker. We'll try to get it compatible with the QTyp dictionary format. We may even find someone to write a multi-tasking P.D. utility to use the word-list. We can also report that Alan Pemberton has been working on a multi-tasking German-English dictionary, based on a P.D. prog and word-list ported over from the ST. And very neat it is looking too!

QTYP
£30.55 (£2.35 P&P)
CARE ELECTRONICS,
DEPT QL,
15 HOLLAND GDNS,
GARSTON,
WATFORD,
HERTS,
WD26JN

QL GENEALOGIST

Excellent Brilliant Of the Highest Order !

This has to be the winner of the "Best QL Software 1990 Award"!

I'm afraid that I shall probably run out of superlatives before I finish this review. I can think of few programs which will stand close comparison with this one for sheer quality, extensiveness and skillful compilation.

If you haven't already started to record your Family History, then why not start now?

Chris Boutal's program is so simple to use and so fascinating to watch in its presentation methods, that it makes Family History recording a real pleasure.

These are the features which the program, QL_GENEALOGIST has:-

1. Rapid LOAD and SAVE times.
2. Menu driven windows.
3. Multi-tasking compatability.
4. Time and date stamping.
5. Configuration for Screen presentation and Printer.
6. 'Variables' dimension control.
7. EXPORTability.
8. Total Family Tree display (On screen or Printer).
9. Multiple viewing screens
10. A Notes File for each person.
11. Rapid name search.
12. Hardcopy ability on all displays.
13. Family relationship cross reference researching.
14. Ancestor Lineage, alphabetically or chronologically.
15. Pedigree Lineage, alphabetically or chronologically .
16. A full indexing facility.
17. A moment-in-time 'Snapshot" facility.
18. A 'Heads of family' indicator.
19. A linked Research Data handler.
20. A Surname 'spelling variation' file.
21. A 'Getting started' self-teaching tutorial chapter.
22. Example listings.
23. An example program displaying the Royal Family line since 1066.
24. A 32 paged manual (A4 size).

I'll give you a very brief description of each feature but as always, this bottle of vintage wine has to be sampled to be appreciated.

Rapid LOAD and SAVE times:

130 names take about 15 seconds to LOAD. SAVEing after each session is completed in a matter of seconds.

Menu System:

The whole program is run by a system of Window Menus (like Qram).

Multitasking Compatibility:

I have had no difficulty Multitasking this with Taskmaster. Very useful too if you have recorded other data on Archive or Archivist as I did.

Time and date stamping:

At the beginning of each session a Date/time sequence enables you to enter for record purposes the time and date of the data input.

'Variables' dimension control:

This feature allows you to control the number of names you wish to configure the program for and also the amount of character space for each name.

Configuration for screen presentation and printer:

The Screen colours can be altered to taste and the Printer and Filename defaults changed whilst the program is running.

Exportability:

This menu option allows all the files to be exported to ARCHIVE for further processing if required.

Total Family tree display:

This is certainly one of the cleverest pieces of the program. Once you have decided on the starting point, the computer displays the whole family tree from that point to the present. It is shown in the usual 'tree' format and you have the option of printing it out. In the screen presentation it also has the facility to move around the tree by means of the cursor arrows.

Multiple viewing screen:

This facility works with the 'tree' display when it automatically remembers five 'views' of parts of the 'tree' and allows you to switch between them rapidly.

Notes file for each person:

This allows you to enter notes on each person recorded and to bring them up when you require to update your research.

Rapid names search:

Should you wish to find a particular name for research or just how many times a certain name crops up in your family history, then this section gives you all the

information you require.

Hardcopy ability on all displays:

Once you have configured the printer drivers, (not required for Epson compatibles), then you have a full printout ability for any of the multitude of displays.

Family relationship cross reference researching:

Select any of the persons on your family tree, press the XREF bar and then select another person. A box is immediately displayed ... "Anne Williams is the HALF SISTER of Mary Jones" or whatever the family relationship happens to be.

Ancestor and Pedigree lineage:

Select a starting point, for example, yourself and then via the pop up menu, select either an Alphabetical or Chronological printout of all your ancestors or your pedigree, as far back as you have programmed them. Their Birth and death dates are displayed as well.

Full index:

This very useful screen or hardcopy printout will set out, in alphabetical sections, details of all the people you have entered into the program. Also shown will be the allocation number to enable you to cross reference them easily.

Moment in time "Snapshot" facility:

This is another quite extraordinary piece of programming. Decide on a moment in time ... say 1939, the outbreak of World War Two and the computer will immediately give details of all of your family who were alive at that time and how old they were. Then, if you dare do the same for the year 1945 ... see if there is any difference!

Heads of family indicator:

This gives a listing of all persons whom you have not allocated a "Mother or Father". Thus they are at the top or "head" of the list. Useful to point out where your next research should start.

Linked research data handler:

Separate files are created when you first set up the program, to hold details of your research.i.e. Birth, death and marriage certificates or tombstone inscriptions etc. When you have entered them the program allows you to cross reference each name to the one on the main file. If there is more than one with the same name it will allow you to move to the correct one. Thus, in future when you call up a name for study in your main file it will automatically refer to all the occurrences of the name and in which research file to find them.

Surname "Spelling variation" file:

In days gone by, before compulsory education, it was quite common to find a variation in the spelling of a family name from generation to generation. Thus Johnson became Johnstone which became Jonson etc. The author of the program has allowed for this and developed a file which cross relates all these occurrences for use with the IDENTITY command.

A "Getting started" self-tutorial chapter:

As you will have gathered from what I have written so far, this program is very detailed and complex (however, quite easy to get to grips with.) Included in the handbook is a step-by-step guide on the workings of the program. You learn to create a simple, yet very valuable fictitious family tree and then the program takes you in easy stages through every aspect of data input and retrieval.

Example listings:

These are included to help make sure you are on the right road in your tree building exercise.

Example program displaying the Royal Family tree since William The Conqueror:

Included with the package is a database of the Royal Family lineage since 1066 AD. This performs exactly the same as your own family history would i.e. you can print it out.

A 32 paged manual(A4 size):

This very detailed manual comes with the package and it sets out all the facilities with explanations where required. It is comprehensive and obviously written by a person totally devoted to his hobby.

Well there we are then, one of the best programs I have reviewed for a long time. One of the few pieces of QL Software I can say you won't be disappointed with ... it is superb!

John Shaw

Since the review was sent there is now an enhanced version of the program (QL GENEALOGIST Second Edition) with improved research reports,new Geography section,improved Notes facility, TREE outputs, all compatible with version one files.

**QL GENEALOGIST Second Edition
£30 (384K MIN RAM,FLP ONLY)
BUDGET QL GENEALOGIST
£12 (128K MIN RAM,FLP OR MDV)
UPGRADES ARE AVAILABLE
DILWYN JONES COMPUTING
41 BRO EMRYS,TAL-Y-BONT,
BANGOR,GWYNEDD,
LL57 3YT**

QMENU

Menu_rext is a pair of extension Things, 'Menus' and 'Scrap Extensions', produced by Jochen Merz. Its origins can be traced back to the Qsup MultiButton 'pick a directory' option. QD & Easy* users will know it as the rather nice menu that pops up when they have to specify a filename.

Menu_rext requires Hot_rext (The Thing Extensions) to be present when Menu_rext is loaded. This ensures that the 'Menus' thing is linked in. If it isn't then the command TH_MENU will link it in later. You won't need to load PTR_GEN and WMAN until you actually want to use one of the menus.

Details on how to use some of the SuperBasic extensions within Menu_rext may be found in QLTR(5), page 30. This package, by Jochen Merz, is the official documentation. Although it is much more comprehensive than my little note in QLTR5, it is not complete. This is not a failing of Jochen Merz - it is just that Menu_rext is being improved quite a bit and he's fallen behind in telling us about the changes.

The Menu extension that is not documented is 'SLST', accessed from SuperBasic via the SELECT_LIST function. This function is great news - it really expands the potential of the 'Menus' extensions. Great one, Jochen!

The manual is 19 loose leaf A5 pages, well printed, with no adverts. It is adequate. The explanation of the machine code interface relies too heavily on the demonstration '_asm' files.

I advise anyone who buys QMENU to get access to the Qjump text files 'thing_ext', 'thing_vector' and 'thing_doc' etc. They are present on the Quanta SPECIALS_0 disc and describe the Thing system quite well. In the CGH PD library, on the 'misc' PD disc you will find a SuperBasic programme (Qdos_listthg_bas) which lists information on Things inside the machine. At the moment it has a simple yes/no user interface but it will be updated soon (exams permitting) to have a Qram style interface.

To use the 'Menus' Thing from machine code all you are given is a brief amount of info on two supplied (Menu extension) access routines, UT_USMEN and UT_FRMEN. We are told which registers are used but it would have been helpful to have a few words explaining what goes on when you call his UT_USMEN or UT_FRMEN routines. Also, the menu routines aren't supplied with the source code - we are given '_rel' files. So you have to be using a S-ROFF (Sinclair Relocatable Object File Format) set up (eg GST assembler and linker) in order to use Qmenu at all from assembly language. I think it is a shame as the source code could have been useful when getting the feel of UT_USMEN and UT_FRMEN. In the Quanta library, on disc LANG_1 there should be a programme 'analib' that will give you a short report on the contents of a _rel file.

The important bit, the definition of each extension within the 'Menus' thing seems

comprehensive. Before a menu is used, a parameter block is set up in memory and then the menu thing is called. The parameter block for each menu seems to be defined quite well.

When the demo given with Qmenu wants to use a menu, it follows this procedure:

1. Put the name of the menu in D2.L (eg 'FSEL')
2. Calls UT_USMEN (which asks the Things system to use the Menus Thing, and then finds the address of the extension Thing you wanted to use & puts that in A1).
/* I am not 100% sure this is exactly what goes on */
3. Clears the parameter block to all 0's
4. Fills in the parameters that aren't 0
5. Puts a pointer to the parameter block in A1.L
6. Calls the routine with the address given by UT_USMEN ... plus \$18 bytes to skip over the Thing header.
7. Release the Menu Thing with UT_FRMEN.

No explanation is given for why the demo requests the 'Menus' thing and releases it every time it wants to use a menu. I wonder why it does not just allocate the 'Menus' thing at the start of the programme, use the menus over and over again and only release the 'Menus' Thing when the programme has finished and is about to remove itself.

The SuperBasic programmer is well catered for in the manual. Each function is explained. The 'Menus' extension relies on the 'Thing-SuperBasic' interface. It seems as if the 'Thing-SuperBasic' interface is still being improved and some of the facilities in 'Menus' are not available for use because the 'Thing-SuperBasic' interface can't handle it yet.

Here is a a brief description of the (undocumented) SELECT_LIST function:

SELECT LIST (SLST)

Definition of parameter block for assembly language users.

parameter no	definition	parameter no	definition
1	ptr cal opt str	6	opt nnl/arr wrd
2	ptr cal opt str	7	opt nnl/arr wrd
3	ptr cal ret opt str	8	opt lng
4	opt lng	9	opt nnl/arr lng
5	opt wrd	10	ptr ret wrd

Don't choke on your coffee - I didn't say I was going to define it in English! You'll need to read 'Thing_ext' before you'll understand it. Non-technical users reading this can experience the feeling it gives techies when they see it for the first time with:

"'Thing' said another voice. Elric glanced in that direction, gasped, drew his sword and felt nausea sweep through him" (Elric of Melnibone by M.Moorcock)

SuperBasic programmers have it easier:

```
option_no = SELECT_LIST ( "Title", "Option 1\Option 2\Option n",  
                          UNKNOWN1,UNKNOWN2, number_of_menu rows, x, y,  
                          outer_colourway, inner_colourway)
```

The reason for placing all the option text into one large string must be that array handling between Things & SuperBasic isn't ready yet. If ESCape/no option is pressed, 0 is returned otherwise the number of the option is returned.

The "Scrap Extension" thing is a recent development. The idea is that the 'Scrap' area will provide a convenient place for applications to swap data with each other. I think this is what UNIX calls 'named pipes'. There is very little here for the SuperBasic programmer but Jochen says that the 'Thing-SuperBasic' interface can't handle the 'Scrap Extensions' yet.

Machine code programmers have two access routines, UT_USSCP and UT_FRSCP. They are used in the same manner as the 'Menus' extension routines. You can clear the scrap area (CLR), enquire about its contents (INFO), overwrite or append data (PUT) and read the scrap area (GET). At the moment there are only 5 types of data (text and the Pointer Environment graphics objects of sprite, blob, pattern and partial save area). If an object is too complex for the Scrap routines to PUT and GET, a user routine may be supplied when calling GET and PUT.

If you are a person who is likely to call the Menu extensions from within your own programmes then you should consider getting Qmenu instead of getting half the story by guess work. If you are someone who has Menu_rext as part of an existing package then you don't need Qmenu - it is only of interest to programmers whose programmes use it. I like the 'Menus' extensions a lot and, thanks to Qmenu, will be using them much more in the future.

Ian Bruntlett

QMENU
£12.90 (EXCL VAT E&OE, £4 P&P)
JOCHEN MERZ SOFTWARE,
IMSTILLEN WINKEL 12,W,
4100 DUISBURG 11
GERMANY

DATADESIGN V2.0

Version 2 of the PROGS database handler, "DATAdesign" became available early in 1991 at a daunting price tag of £85, a significant increase over the first version, which retailed at £45. Shortly before I wrote this, PROGS announced drastic price cuts, which reduced the price of Version 2 to £50. As far as I am aware, version 1 is no longer marketed. (As a purely personal footnote, the price reductions make "The Painter" a very attractive bargain at £25!)

DATAdesign 2 comes accompanied by a much smarter manual in a black mock-canvas- finish ring binder, containing a lot more pages. The increase in size is due to some expansion of topics covered too sketchily in the Version 1 manual (notably the "Print" command), material on new commands, and, mainly, indices for the keywords in the new user interfaces for assembler and superbasic. The paper in the version I have looked at was brick-red: unattractive to read though perfectly legible, but it is likely to make copying a major problem, which presumably is the idea.

The new DATAdesign is very different in operation from its predecessor, though the screen display looks at first sight very similar. In fact, even the start-up screen has altered, including three new icons, "F9 Again" (a very useful facility to repeat commands), "F10 Mark" (to mark specific records in a file for special treatment), and a standard QJump "Zzz" sleep button. To make room for this, the screen size is larger, and the "DATAdesign" icon has gone; what it once contained has been incorporated in the old "Info" icon with fancy PROGS logo added. These changes seem sensible and efficient. The other icons in the original version, "Next", "Previous", "Files", and "Commands" are retained.

The program is much bigger altogether than its predecessor. The DATAdesign task is an additional 4k, and it also uses a set of extensions which occupy the best part of an additional 10k - all this as well as the usual QJump pointer environment including a pointer interface and window manager etc., and an updated and much expanded (from 10 to 17k) set of menu extensions by Jochen Merz. The whole works amount to a very serious bit of programming effort!

DATAdesign now offers much more comprehensive facilities for handling databases. One major enhancement is the range of parameters which can be controlled in a variety of commands. Files can be treated as a whole, or in part by marking certain records, or by filtering a file for certain types of records. The ways in which you can select records have been expanded too, and now include greater or lesser than, string comparisons, whether case dependence is required. These improvements add flexibility to a variety of commands - "Save Name/Options", "Search", "Print file", "View file" and "Sort file".

COMMANDS

The "Commands Menu" offers both new and changed options. None of the changes in any part of the program is merely cosmetic. The fact that a "Search" command has replaced "Find" is a clue to a much wider range of controllable parameters. The range includes field or global search, greater or lesser than controls, finding a record containing a string, case dependent or independent, backwards or forwards. "Replace" has a separate slot in the Commands Menu - but see under "COMPLAINTS" later on! You can now "Duplicate" a record so as to be able to change a displayed record, and still retain the original form of the record in the file. You can "Filter" records according to a wide set of parameters - in fact most of the parameters which are can be used in the "Search" option. "Filter" is rather similar to the "Group" command in FlashBack, or the "Select" command in Archive, but seems rather more flexible and easy to use.

The "Filter" command is a major change which affects other operations too. Once you have filtered your file, the "Info" option on the main menu will tell you, as before, the filename, its length, the number of records, and the number of fields; it will now also tell you how many records are "visible" - i.e. not filtered out. And when you view your file, you have a range of options about whether to view it as a whole, or just the filtered (or, equally, just the marked) records.

The "Files" Menu has been enhanced too. "Save As" has given way to "Save Name/Options" to reflect a better choice of which bits of the file to save how. (As before, you can opt for a sudden-death "Save" which first deletes the filename you loaded in!). "Print", likewise, has an expanded set of controls. You can, it seems, now "Merge" a file - though I have not managed to do so (see "COMPLAINTS" later). It is an odd omission that the manual fails to make reference to this facility.

PRINTOUT

One really significant improvement relates to the printing mechanism. In version one, you have to tell the program how to print out the records by typing in a "form-string" according to instructions which at least one user has found, in the original manual, largely incomprehensible. The new manual contains several pages on this crucial subject, with examples. Best of all, you can now save form-strings you feel are useful, and load them back in later for re-use. This saves a lot of typing and, no doubt, strain on the user's nerves.

The "Print file" option is now, thanks to the additional facilities to save and re-load form-strings, a useful, simple, quick procedure. Maybe I would now even prefer it to the FlashBack system using a separate Report Generator with printing templates.

USER INTERFACES

This isn't an enhancement of version 1. It's a completely new concept.

What is involved is two sets of utilities, one for use in SuperBasic and the other for use in Assembler. The two sets match precisely. They consist of comprehensive file-handling keywords which are operated by a task called "engine", of which there is a separate version for use by SuperBasic. These extensions are responsible largely for the vast increase in size of the manual. They are also neatly contained in _ddf data files for reading into DATAdesign.

Between them, these two sets of facilities offer you the chance to write your own programs, in either SuperBasic or Assembler, for your own data-handling purposes. So you can tailor your system to suit your own special needs. So no need for complaints about what "DATAdesign" does or does not offer! (But see later, nevertheless.)

This idea seems an excellent one. But before you start to think what a generous notion it is, take care to read what the manual says about copyright.

SPEED

How does DATAdesign version 2 perform? Very well. Some rough timings:

File loading time is no improvement over version 1, but that was quite reasonable even though slower than FlashBack loading times. The Psion gazet_ddf loaded, and I switched to display, in 4 seconds. The Quanta Library Guide, a rather vast file, took 20 seconds.

In the sorted Quanta file, it took 1 second to find "Z88" starting from the first record. In the same file, unsorted, the search took 3 seconds from the first record, and 12 seconds from the last. Searching speed seemed a lot quicker than in version 1.

Sorting speeds depend a great deal on how many parameters have to be considered. Sorting of the Quanta file took between 32 and 42 seconds, depending on whether the sort was first or second level, reverse or not, alphanumeric or numeric, case dependent or not. The range of facilities now offered is better than FlashBack, but speeds are correspondingly slower - slower, in fact, according to my timings, than version 1 of DATAdesign. Never mind, though. Speed isn't everything. In any case, DATAdesign is quite fast enough to interrupt any coffee-making plans you might have.

COMPLAINTS DEPARTMENT

First, a minor one. The manual thanks Graham Evans for checking that the manual makes sense to UK readers. Unfortunately, PROGS do not seem to have given him all the data files to check as well, so the example-file has "Surname" as its first fieldname!

Secondly: couldn't we have something a bit less indigestible than "Truncate record" to cancel alterations? What was wrong with "Undo"?

Thirdly: Archive has separate commands for load a file and displaying it. I could never understand the point of that. Then FlashBack appeared, and (hey presto?) when it loaded, it showed the record you were on when you last saved the file - quite automatically. DATAdesign seems to me to have gone back a step in loading, and showing a blank record. You have to click "Previous" to get to the last record you entered, or go into "Commands" mode to get to the first record in the file. This is ideal if you're sure you're in the right file and want immediately to enter a new record. I, and I suspect many other users, would prefer to have a record displayed, if only for confirmation that I am in the right place.

Then, more annoyingly, the manual, as I said, doesn't appear to mention the "Merge File" command. I was unable to make this appear in bold print on the menu; i.e. the command remained inaccessible. If it exists, it surely ought to appear in the manual as well as on the menu. Or is it for future development, when PROGS have worked out how to do it? Possibly it already works perfectly simply. But some encouragement in words would be helpful. And certainly, this sort of doubt ought not to be allowed to occur in the mind of the user.

Much the same applies to the "Replace string" command. I can't access it. I can't find it in the manual. What is the point of having a misty-printed command on the menu if you can't get at it? Grrr!

(A thought: could there be an updates file that I've missed out on?)

Finally, the one sticks in my teeth. PROGS supply a SuperBasic program to allow to alter the order of, or to alter the names of, fields in a file. Surely ("oh why oh why" time!) it ought to be possible to change fieldnames from within DATAdesign. Shouldn't it? It can't be that difficult to program it. Can it? You can alter fieldnames very simply in FlashBack - though it is a facility that, admittedly, you're unlikely to need that often.

And a more general addendum. I don't think I understand how you would go about printing out a set of records three across a page. This applies to FlashBack as well. It might be useful to have such a facility. Or is there, perhaps, some user who has succeeded in achieving this?

Another general grouse. How about a database program which can search a file and pick out duplicate records? How about one which can search two files, or even three, and pick out duplicates? I would find such an UNduplicate (or ZAP) command rather more useful, in fact than the "Duplicate" DATAdesign offers.

"Why ask for the moon when we have the stars?" (misquote - correct version and source to Richard, please). Yes, but the stars could be brighter still.

CONCLUSION

DATAdesign 2 is a very significant development and improvement of version 1. It comprises a wider range of facilities and options, and is easier to use. The use of the pointer environment is quick and simple; it is particularly effective in selecting devices and filenames for loading and saving, for instance. In some areas - parameters for searching, sorting, saving and printing - it appears to have overcome some limitations of FlashBack, too. At its reduced price, it seems like a "good buy". Nevertheless, there are aspects of the program or its manual - and important ones, too - that could do with improvement. I look forward to version 3.

Mike Edwards

SECOND OPINION

I've actually been trying to use this database, for a simple subscription list for another, non-computer related, magazine I'm associated with. And I can't say I'm very impressed with what I've had to put up with so far. (Note some of these comments relate to the initial version of DataDesign, and are based on my experience.)

Firstly I'd like to endorse Mike's comments about the manual. The first version was very cryptic; the second is less so - but important commands are still not that well explained. The Print command at least has some sample commands now, but even so the selective print commands using < and > etc (which seem pretty obvious) don't seem to work. Or rather I couldn't get them to work the way I wanted to. I still can't see why we have to compare upwards or downwards. (I tried both and got little response either way.) As a default the program simply prints out your file - which would suit me fine as I designed the database layout with this in mind. Unless, that is, you have a record which contains hidden (blank) lines in its entry. (Apparently created when I was using v1.00. I deleted two fields from all the entries, which seemed to work - but one of the entries had more than 1 line of text and the program seems to have merely wiped those lines without reclaiming them. Net result - quite a few wasted address labels when the record printed out 2 extra blank lines on one label, putting the rest of them out of sync. At least the program no longer stops printing part way through a file like it did before!

The Search (like the Find before it) does not seem to work very reliably in my experience. Using a Global find (or more specific fieldnames) one cannot guarantee finding a particular record. Well I can't, anyway, on my version of it. (v2.01) Note that Search has to go up or down the database - if you want to Search the entire DataBase in one go, you have to go to the first or last record. I'd also like to see the Filter and Mark commands explained more fully. Presumably these mean something to people used to databases which have these features, but I suspect less experienced users will find them mystifying.

It is possible that my problem lies less with the program proper than with the way the menuing system works. I sometimes find that the success of Search depends on the order in which you highlight the various options. I'm still not sure about typed in commands, such as Compare on the Print menu. Is your previous input retained as the new input when you re-access the menu or is it merely printed, with the program waiting for a new input in this field? Things are further confused by the fact that left and right mouse buttons are sometimes "hit" and sometimes "do" and vice versa.

I have written to PROGS with regard to these complaints and spoken to their current U.K. distributor: Dilwyn Jones Computing and await their reply with interest.

Richard Alexander (and no, we're not planning to publish a rival Database prog - indeed we have been supplying this one!)

DATA DESIGN V2.03
£50 (512K MIN RAM, FLP)
AVAILABLE FROM DILWYN JONES COMPUTING

SUPER TOOLKIT II (PART 4)

9 Job Control

The QL was the first affordable micro to allow multitasking. It is one of the many features that sets it apart from the herd and yet is one of the most difficult to control satisfactorily on a standard machine.

It is also one of the areas that most interests 'Tinkerers' like myself.

The extensions for job control are documented in section 9 of the Toolkit II manual.

There are three commands (JOBS, RJOB, SPJOB and AJOB) and four functions (PJOB, OJOB, JOB\$ and NXJOB) provided.

9.1 Job Control Commands

JOBS lists the current jobs. By default the output will go to #0 but as with standard SuperBASIC procedures the output may be sent to any other channel by simply appending # and the channel number. Thus **JOBS #2** will display a list of jobs in #2.

Toolkit II also allows **implicit channels**. That is, if one wishes to send the output to a device one need not open a channel to that device, send the output to the channel (as shown above) then close the channel, but may append the command with \ and the device name.

The following will create a file job_txt on flp1_ that contains the list of jobs on the system:

```
JOBS \flp1_job_txt
```

One can just as easily print out the list of jobs with one command:

```
JOBS \ser1
```

With SuperBASIC as the only job in the machine, the JOB command would display a table as follows:

```
Job tag  owner priority
```

```
0 0 0 32
```

SuperBASIC does not have a job name. Names are normally displayed after the job priority. If a job is suspended (see SPJOB below) then an 's' would be shown immediately to the left of the job priority.

For an explanation of job numbers, tags, ids, owners and priority see section at end.

RJOB allows one to remove a job (other than SuperBASIC) from the machine. RJOB is followed either by the job name or by the job id. The job id is a combination of two parameters, the job number and the job tag. These values are displayed by using the JOB command. If one executes a program, mandelbrot, using the command `ex flp1_mandelbrot`, the JOB command would produce a list as follows:

Job tag	owner	priority	
0	0	0	32
1	0	0	8 mandelbrot

Note a job activated by SuperBASIC will start with a priority of 8. Some jobs will not have names.

The job mandelbrot may be removed as follows by the command **RJOB mandelbrot**.

There is a further parameter that may be added to the command. This is an error code which through the use of machine code could be read by the parent job (that job that started the job being removed). Thus one could type **RJOB mandelbrot, -1**. This is not relevant to the user of SuperBASIC except that it appears that when one follows RJOB with the job id rather than the job name, the error code must also be used. Thus one would type **RJOB 1, 0, -1**. The reason for using the job id as a parameter is that as previously mentioned, some jobs do not have names. Another reason is that it is possible to have many jobs with the same name. If the job name is used then QDOS will remove the first of that name.

SPJOB allows one to set a job's priority. As already mentioned, a job started by SuperBASIC will be given a priority of 8. If the job is required to run faster or slower then one must raise or lower its priority. Like RJOB the first parameter is either the job name or job id. If a job id of -1 is used then the current job's priority is altered. (If one is typing SPJOB as a direct command this would be SuperBASIC. However, if SPJOB is used in a SuperBASIC program that is then compiled an argument of -1 would refer to this compiled program). The second parameter is the priority. This is an integer between 0 and 127. A priority of 0 means the job will become inactive (it will not get a share of cpu time).

Thus, if one wished to alter the priority of the job mandelbrot (as used in the example above) one could type either of the following:

```
SPJOB mandelbrot,16
SPJOB 1, 0, 16
```

We would then expect the job to run approximately twice as fast. Note the speed of execution of a job not only depends upon its priority but also upon the availability of resources it wishes to use. For example only one job may use the keyboard at a given time so if a job requires input and the keyboard is already used then it will be suspended by QDOS until the keyboard is available (either because the first job has finished or control-C is used).

AJOB is used to activate a program which has been loaded into memory but not previously started.

(If a job has previously had its priority set to 0 it could be reactivated either by setting its priority to a positive value or by using AJOB. A job executed with the command ET would be in an inactive state until activated by further commands such as AJOB).

9.2 Job Status Functions

PJOB returns the priority of a job. As with the commands above, the job may be specified either by its name or by its id. Since it is a function the job name or id must be enclosed in brackets. Thus one may type **PRINT PJOB (mandelbrot)**. From within a program one might wish to double a jobs priority:

```
150 PRINT 'Do you wish to speed up mandelbrot?'
160 answer$ = INKEY$ (-1)
170 IF answer == 'Y' THEN
180  priority = PJOB (-1)
190  priority = 2 * priority
200  SPJOB -1, priority
210 END IF
```

If mandelbrot is a SuperBASIC program the inclusion of a section similar to the above would allow the user to speed up the job. Of course this only has an effect if other jobs are running: if only one job is active on the computer it will take the same amount of time to run if its priority is 1 or 127.

OJOB returns the id of a jobs owner (ie the job from which it is activated). In our example, **PRINT OJOB (mandelbrot)** would print 0, the id of SuperBASIC.

JOB\$ returns the name of a job given its id. Thus, **PRINT JOB\$ (1, 0)** would print 'mandelbrot'. This is useful in any programs that refer to other jobs: one may wish to job ids in calculations but when it comes to displaying information it is better to convert to the job name.

NXJOB returns the id of the next job in the job tree. In our example **NXJOB (0)** would have a value of 1 ie the next job after SuperBASIC is mandelbrot. As more jobs are activated on the machine the job tree becomes more complex. Jobs may be activated by SuperBASIC or by another job.

Super Toolkit thus provides a set of commands and functions for controlling jobs and finding out information about jobs. It would be nice to have more functions for example a function that returned the location of a job in memory, its length, the location and length of data it is using etc. Much of this information can be found by using machine code.

PD NEWS

Probably the most important news here is that we, C.G.H. Services have completely re-organised our P.D. library. Out go all those irritating and confusing Mdv batches (and mdv supply) and in come simple disk volumes. We apologise to those of you still struggling with mdvs, but the time it takes to sort out the library into mdv batches, make things compatible with mdvs, the number of extra disks needed to store alternate versions and the time it takes to copy progs onto mdvs made it increasingly wasteful of my time and energy. The prices have also been cut for most progs. We're charging a flat-rate £2.00 per disk (inclusive of media and post and packing in the U.K.) which whilst not the cheapest you can get for QL software, is the lowest price we can charge. Note C.G.H. Services does not generate enough business to cross-subsidise the P.D. Library, and we still have to pay out for a wide range of costs that hobbyists can charge to their household budgets (electricity etc.)

Onto the disks themselves. Probably one of the most significant new releases is Dave Walker's C68 Compiler, now on Release 2.00. Currently this comes on 9 disks, of which only 2 are really necessary to run it. The rest are source files for the compiler and a single dusk tutorial. Dave has promised to keep us up-to-date with major releases of this product, although we'll also be upgrading the "inbetween" versions as we get hold of them. Dave has also sent us a program that is intended to allow certain Atari ST programs to run on the QL. This isn't complete yet but may be of interest to those of you with access to an ST.

Amongst the other new programs are Alan Pemberton's version of the ST German - English Dictionary. This allows users to type a German word and you'll get an English equivalent or more. Obviously you'll need a knowledge of

German grammar to get the most out of it, but it could prove invaluable for those of you with access to German software. With the help of Alan and Rich's SToQL program we now have a total of 8 disks of ST screens. These cover a wide range of subjects and are currently unsorted. Also available is a disk of QL screens. Amongst those most recently added are some screen shots of QL personalities in digitised form. If anyone has access to GIF format screens on the PC or ST (of a non-pornographic variety) we would like to add these as well to the 3 disks we already have.

Club QL International have been very kind enough to send us 6 disks with their newsletters and programs on. Haven't had a chance to examine these closely yet, but it should prove a very useful resource for those of you interested in QL programming. Jeremy Davis has also just sent in a revised version of his QPACER 2 program which allows users of QPAC 2 (no less) to configure it for use with their system.

Recently acquired but yet to be formally added to the C.G.H. Services catalog are programs by Stan Harle - a Capital Gains Tax program and a Simple Book-keeper; Roger Hamilton's ARTIP - a touch typing suite of programs and Andy Pritchard's simple front end program (still in development) called SWIPE. We'll be allocating these to the relevant disks in the next week or so. We are still interested in acquiring other non-copyright P.D. programs for the library so if you spot anything that is not in our catalog do send it in. QL Supersoft have allowed their Home Budgeting program into the Public Domain but unfortunately we haven't been able to get hold of a version that is complete (dodgy mdvs I'm afraid.)

Richard